DOCUMENT RESUME

ED 303 098 HE 022 118

AUTHOR Baldwin, Roger G.
TITLE Faculty Vitality in "Different Worlds": The View from Three Academic Areas. ASHE 1988 Annual Meeting Paper.
PUB DATE Nov 88
NOTE 41p.; Paper presented at the Annual Meeting of the Association for the Study of Higher Education (St. Louis, MO, November 3-6, 1988).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Academic Education; *Career Development; College Faculty; *Faculty College Relationship; General Education; Higher Education; Liberal Arts; *Productivity; *Professors; Success; Teacher Role
IDENTIFIERS *ASHE Annual Meeting; *Faculty Vitality

ABSTRACT

The professional lives of "vital" professors in the areas of arts and humanities, mathematics and natural sciences, and the social sciences are examined, and common and subject-area specific factors (such as attributes, activities, and sources of support) closely associated with faculty vitality are identified. Subjects were chosen from four private higher education institutions in the southeastern United States. Only full professors beyond all the formal structural hurdles of the academic profession were eligible to participate, and 50 were interviewed. Findings are discussed in terms of primary professional interests and strengths, time committed to faculty roles, faculty activities and achievements, sources of satisfaction and dissatisfaction, staying up-to-date, factors influencing professional success, role diversification, and short-term professional goals. Results indicate that vital professors in liberal arts colleges share a common professional profile, and they view teaching as their primary interest, responsibility, and professional strength. Steps small colleges can take to promote faculty vitality are: (1) encourage them to revise and expand their professional roles, (2) be sensitive to subtle differences among the major academic fields, and (3) recognize that some fields may automatically be more resource and opportunity rich than others. An appendix presents a description of vital professors. Eleven tables and 16 references are included. (SM)

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Faculty Vitality in "Different Worlds": The View from Three Academic Areas

Roger G. Baldwin
Assistant Professor
College of William and Mary

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Paper presented at the annual meeting of the Association for the Study of Higher Education, St. Louis, November, 1988.

HE 022 118

ASHE ASSOCIATION FOR THE STUDY OF HIGHER EDUCATION

Texas A&M University
Department of Educational Administration
College Station, TX 77843
(409) 845-0393

This paper was presented at the annual meeting of the Association for the Study of Higher Education held at the Adam's Mark Hotel in St. Louis, Missouri, November 3-6, 1988. This paper was reviewed by ASHE and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC collection of ASHE conference papers.

Introduction and Objectives

This paper examines the professional lives of "vital" professors in three major subject matter divisions, arts and humanities, mathematics and natural sciences, and the social sciences. Its objective is to identify common and subject-area-specific factors (e.g., attributes, activities, sources of support) closely associated with faculty vitality.

Many recent books and national reports (e.g., Bloom, 1987; Bowen and Schuster, 1986; Boyer, 1987; Cheney, 1988; Clark and Lewis, 1985) raise questions about the overall condition of American higher education and the vitality of the academic profession. Faculty vitality is a qualitative concept, more encompassing than faculty productivity. It is commonly associated with institutional vigor and educational quality.

Over the past 15 years massive sums of money have been invested in efforts to "renew" professors and support faculty morale. A wide range of faculty development policies and programs has been designed to enhance professors' skills and expertise. Yet concern persists that the academic profession may be failing to keep pace with rapid advances in knowledge and, hence, failing to provide the state-of-the-art teaching and research essential in a competitive world.

Regrettably, numerous faculty development initiatives have been based on a uniform model of academic life derived from the research university. Many policies and programs intended to foster professional growth rely on unfounded assumptions or myths concerning factors that enhance the performance of professors across the board. Such initiatives frequently fail to recognize that professors live in "different worlds" (B. Clark, 1987) structured by

their subject field and type of institution.

This paper centers on the experiences of vital professors in one type of higher education institution, the undergraduate liberal arts college. It examines the degree to which vital academics in this type of setting lead similar professional lives and the extent to which their subject fields structure their careers in distinctive ways.

Theoretical Perspectives

Clark, Boyer, and Corcoran (1985) suggest that faculty vitality is a qualitative, contextual phenomenon that varies in different institutional and disciplinary settings. Hence, the vital professor and the factors that influence his or her performance differ in significant ways in various contexts.

In essence, different types of higher education institutions and the major academic subject divisions represent distinctive professional subcultures. Schein (1986) states that a culture affects the manner in which its members think, feel, and act. According to Schein, the organizational culture concept is an "especially relevant way to gain understanding of the mysterious and seemingly irrational things that go on in human systems" (1986, p. 4). Clark (1987), in The Academic Life: Small Worlds, Different Worlds, recognizes the merits of studying faculty in the context of their disciplinary subcultures. "The discipline has become everywhere an imposing, if not dominating, force in the working lives of the vast majority of academics" (Clark, 1987, p. 25). In spite of the "hegemony of subjects" (Clark, 1987, p. xxx), however, institutions also play a powerful role in shaping professors' work lives and,

consequently, their vitality. According to Clark (1987), the "major institutional sectors provide different tasks and conditions of work, different identities and histories, ... different career paths, and different associational networks" (p. 263). The power of institutional context has been demonstrated in studies showing how publication activity changes as professors move from one type of college or university to another (Finkelstein, 1984). Ruscio (1987) argues, for example, that a distinctly different type of scholarship (more individualistic, less "taxonomically upstanding" [p. 213]) has evolved in the selective liberal arts college.

Clark suggests that the disciplines' power to structure academic life decreases as one descends the institutional hierarchy. Subject fields matter less and institutional requirements matter more the further a professor works from the research university.

Given their position between the research university and the community college, faculty in the undergraduate liberal arts college are subject to the demands of their fields and their institution. To understand the forces that shape faculty vitality in the liberal arts college, it is necessary to study the vitality phenomenon from the perspective of this distinctive type of institution and the major subject fields of its faculty.

A preliminary stage of the present study suggests that vital faculty in undergraduate liberal arts colleges typically have more dynamic and diversified careers than their colleagues in general.* They work longer hours but devote a smaller portion of their time to teaching-related activities. Instead,

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*See Baldwin (1987).

they invest more time in activities such as scholarship and administrative and institutional service. The study's findings indicate that vital professors also have more clearly defined short-term (5 to 10 year) goals that serve to focus and direct their professional efforts. Likewise, in comparison to a representative sample of their counterparts, they collaborate more with colleagues, engage in more role changes, and take more professional risks during the course of their careers.

Given the disciplines' significance in the work lives of academics, it is necessary to take a sharper look at vital faculty through the lenses of the major academic areas. This process should help to determine what factors characterize the vital undergraduate liberal arts college professor in general. It should also identify factors unique to vital professors in distinctive subject areas.

Method and Data Sources

This exploratory study employed qualitative research methodology. Clark and Corcoran (1985) argue that the qualitative research paradigm is appropriate for faculty vitality studies due to the ambiguities and complexities of the vitality concept. A structured personal interview guide containing over 30 mostly open-ended questions was developed by the researcher to gather data. Questions concerned professors' interests, goals, activities, satisfactions, working conditions, professional development and colleague relationships. A brief questionnaire requesting demographic data and information on professors' career activities and achievements was mailed to participants prior to their interview.

Subjects were chosen from four respected private higher education

institutions in the southeastern United States. The institutions are principally undergraduate liberal arts colleges, although three offer limited advanced degree programs. In spite of their shared primary identity, each falls in a different category of the Carnegie (1987) classification scheme (Liberal Arts College I, Liberal Arts College II, Comprehensive Universities and Colleges I, Comprehensive Universities and Colleges II). This categorization supports Clark's (1987) assertion that the definition of the liberal arts college is "notoriously slippery" (p. 21).

The four institutions have long records of educational service, two dating back to the 18th century, one to the early 19th century and one to the early 1900s. Many of their faculty members were trained at some of the leading research universities in the United States.

Only full professors beyond all the formal structural hurdles of the academic profession (tenure, promotion in rank) were eligible to participate. The intent was to reduce the influence extrinsically imposed career goals and activities might have on the interview responses. Interview subjects were chosen in a two stage process. On the four campuses, administrators and faculty members with an institution-wide perspective offered the names of full professors they regarded as vital. Nominations were based on a broad definition of the vital professor in the liberal arts college context (see Appendix). In essence, a vital professor was defined as a "star performer" in those areas his or her institution prizes most (Schuster, 1986). A faculty member had to be cited by at least two persons in order to be classified as vital.

Fifty "vital" professors were interviewed by the author. Table 1 summarizes the composition of the sample by institution and academic area.

Insert Table 1 Here

A coding scheme was developed inductively from the open-ended interview responses. The 50 vital faculty interviews were coded employing the classification scheme that emerged from the systematic inductive process. Interrater exercises were undertaken by the author and a research assistant to ensure that the coding procedure met reliability standards. Response frequencies, percentages, and means were calculated as appropriate and representative quotes from the interviews that illustrate the major descriptive findings were identified. The intent of the data analysis was to identify patterns, themes, attributes, and experiences that characterize vital faculty in general or, more specifically, vital professors in any of the three academic areas.

Findings

Tabulation of the interview and questionnaire responses reveals both similarities and differences among vital faculty in the three academic areas. The remarkable number of shared perceptions and experiences is perhaps most striking. Yet the factors that differentiate among the faculty groups also deserve careful scrutiny.

Primary Professional Interests and Strengths

Members of the three groups show virtual consensus on the order of their primary professional interests. Table 2 shows that instruction is their

Table 1: Distribution of Sample by Field and Institution

Field	College				
	A	B	C	D	TOTAL
Art and Humanities	3	1	9	5	18
Math and Natural Sciences	2	2	6	4	14
Social Sciences	2	2	8	6	18
TOTAL	7	5	23	15	50

highest priority followed by research and scholarly work. Attitudes toward administrative and other forms of institutional service and outside professional activities and service are not quite as uniform. Two faculty groups indicate a higher interest in external professional activities but social science professors rate the two categories equally. On the whole, this ranking of interests is consistent with the primary mission of the discipline-based, but student-oriented liberal arts college.

Insert Table 2 Here

The almost parallel pattern of interest rankings should not, however, be permitted to mask noteworthy differences. It seems particularly important to recognize that math and natural science professors were less instruction-oriented and more research-oriented than their colleagues in other fields.

Data on professors' primary strengths (Table 3) serve to qualify somewhat the findings on faculty interests. The participants in this study regard teaching and knowledge of their fields as their primary professional assets. Although Table 2 suggests that they are very interested in scholarship, Table 3 indicates that less than one in four count research and outside professional activities among their primary strengths. Clearly, this faculty sample feels most competent in its teaching role. A history professor, for example, described himself as a good teacher, "I am not a scholar but someone who has challenged students and made a difference in their lives." A biology instructor assessed his strengths in a comparable way: "I know my

Table 2: Mean Ratings of Vital Professors' Primary Professional Interests

(1=greatest interest; 5=lowest interest)

	ARTS/ HUMANITIES n=18	MATH/ NATURAL SCIENCES n=14	SOCIAL SCIENCES n=17	TOTAL n=50
Instruction and related activities	1.17	1.57	1.29	1.33
Research and scholarly work	2.22	1.78	2.00	2.02
Administrative or other institutional service	3.67	3.50	3.35	3.51
Outside professional activities and service	2.94	3.14	3.35	3.14

material. I am articulate in class. I teach on a personal level."

Insert Table 3 Here

No strong distinctions by academic field emerge from the data on faculty strengths. Nevertheless, the figures for mathematics and natural science faculty suggest that they may be slightly more subject- and research-focused than their colleagues and less inclined to regard various forms of institutional service among their principal professional strengths.

Time Committed to Faculty Roles

The manner in which professors divide their professional time again reflects the realities of life in the undergraduate college. As Table 4 illustrates, vital professors typically work for more than 40 hours per week regardless of their subject area. In addition, they devote the largest portion of their effort to instruction-related activities. Research and scholarly work take the second largest segment of professors' time in the three subject areas followed by administrative and other institutional service and outside professional activities and service. The fairly consistent pattern of these findings across the three groups suggests that faculty obligations are clearly understood in the liberal arts institution.

Insert Table 4 Here

Minor variations are evident in the percentage of time arts and humanities professors devote to research and scholarly work. Some variation also exists

Table 3: Primary Professional Strengths

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
Teaching	10	55.6	7	50.0	10	55.6	27	54.0
Knowledge, competence in field	6	33.3	7	50.0	7	38.9	20	40.0
Research, scholarship, outside professional activities	4	22.2	4	28.6	4	22.2	12	24.0
Service to institution, department	6	33.3	3	21.4	6	33.3	15	30.0
Rapport with students, colleagues, etc.	2	11.1	7	50.0	6	33.3	15	30.0

Table 4: Time Committed to Faculty Roles

	ARTS/ HUMANITIES	MATH/ NATURAL SCIENCES	SOCIAL SCIENCES	TOTAL
Mean hours worked in a typical week	56.1	52.1	54.8	54.5
Mean percentage of typical week devoted to:				
Instruction and instruction-related activities	55.5	55.0	51.5	54.0
Research and scholarly work	17.7	22.7	23.3	21.1
Administrative and other institutional service	15.4	15.9	14.1	15.1
Outside professional activities and service	10.1	6.3	11.0	9.4

in mathematics and natural science professors' investment in outside professional activities. On balance, though, the similarity with which faculty in the different academic areas approach their professional responsibilities seems more revealing than do the differences.

Faculty Activities and Achievements

By definition, vital professors are vigorous, productive persons. Hence, the level of performance documented in Table 5 should come as no surprise. All five measures of professional activity indicate a high degree of faculty engagement. Regardless of their affiliation with the arts and humanities, mathematics and natural sciences, or the social sciences, the great majority of the study's participants have been active in course development, scholarship, publication, and consulting. Perhaps the greater surprise is the consistent level of professional activity across the three academic areas. One might assume that natural scientists would have more occasions to consult or apply for project funding than their counterparts in the arts and humanities or social sciences. On the contrary, however, the findings demonstrate that vital professors act on numerous fronts no matter what their subject field.

Insert Table 5 Here

Professors' perceptions of their major professional accomplishments (Table 6) again reveal important similarity across fields. Large percentages of vital faculty in all three academic areas cited research and publications they were proud of. Many also noted accomplishments associated with the

Table 5: Faculty Activities and Achievements

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
During past five year period:								
Taught a new course	16	88.9	12	85.7	15	88.2	43	86.0
Presented a paper/ served on a panel at a conference	15	83.3	10	71.4	14	82.3	39	78.0
Served as a paid consultant	12	66.7	9	64.3	11	64.7	32	64.0
Published in academic or professional journal	14	77.8	11	78.6	14	77.8	39	78.0
Applied for project funding	16	88.9	11	78.6	10	58.8	37	74.0

teaching role. A religion professor stated that his primary achievement was "reaching a fair number of students." A philosophy professor reported that he had "passed the torch" [of his field to the next generation]. Many mentioned scholarly accomplishments such as "a book on Matthew Arnold that was recognized by scholars" [an English professor] or appointment as editor of a specialized zoology journal [a biology professor].

Insert Table 6 Here

Some subtle differences between fields do emerge from the data on faculty accomplishments, however. Again professors in the math and natural sciences category appear to take a somewhat distinctive approach to academic life. Fewer of them cited teaching-related achievements. In contrast, slightly more of them mentioned scholarly achievements and many more mentioned contributions they had made through department and institutional service. The latter include such things as "starting an honors program in the department" and "a collection of assignments (such as chair of the faculty senate) indicating I had the respect of my colleagues." The difference by field in faculty accomplishments are not profound, but they do suggest that vital professors in various subject areas may emphasize activities and reap rewards from somewhat different aspects of the faculty role.

Sources of Satisfaction and Dissatisfaction

Findings on sources of satisfaction and dissatisfaction (Table 7) once again reveal more similarities than differences among vital professors. Fairly comparable groups of teachers in the three categories described the

Table 6: Major Professional Accomplishments

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
Teaching-related	11	61.1	4	28.6	9	50.0	24	48.0
Research, publications	11	61.1	10	71.4	11	61.1	32	64.0
Service to institution, department	3	16.7	7	50.0	3	16.7	13	26.0
External professional activities and service	2	11.1	2	14.3	3	16.7	7	14.0
Honors, awards, recognition	9	50.0	6	42.9	4	22.2	19	38.0

challenge of their work as a source of satisfaction in their careers. A large majority of faculty in each area also identified students as a satisfaction source. A religion instructor spoke of the joy of "working with [students] as they struggle with life's questions." Likewise, a history teacher described the pleasure of "seeing students blossom and do well in life." A physics professor reflected on what may be a teacher's ultimate source of satisfaction. In his opinion, it is the "opportunity to remain a perpetual adolescent by interacting with students."

Insert Table 7 Here

Committee-work, meetings, and various administrative duties were most often cited as a source of faculty dissatisfaction. The majority of professors in all three fields seem to agree with the sentiment of an English professor. In his opinion, you get "few results [from committee and administrative work] for a lot of time invested."

A substantial portion of respondents in each category also cited grading and other routine aspects of academic work as a source of dissatisfaction. A number used the term "drudgery" to describe the grading process. Interestingly, a somewhat smaller group of arts and humanities faculty than those in the other two categories noted this dissatisfaction source. Conceivably, the arts and literature offer more avenues for variety in teaching and scholarship, than do more paradigm-based, more structured academic fields.

Staying Up-to-Date

Some evidence of distinctive customs or practices among differing

Table 7: Sources of Career Satisfaction, Dissatisfaction

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
Satisfaction source:								
Students	16	88.9	12	85.7	12	66.7	40	80.0
Sense of challenge, achievement	7	38.9	7	50.0	6	33.3	20	40.0
Dissatisfaction source:								
Grading, routine aspects of academic work	5	27.8	7	50.0	8	44.4	20	40.0
Committees, meetings,	11	61.1	8	57.1	10	55.6	29	58.0

academic areas does emerge from data on the strategies professors employ to stay up-to-date (Table 8). The majority in all fields indicate that they read and participate in professional associations in order to stay current. Interestingly, however, of the three groups, considerably lower percentages of social scientists stated that they stay up-to-date through association memberships and attendance at professional meetings. Similarly, fewer mathematics and natural science professors indicated that they read in order to remain current. The research and publication category provides perhaps the most revealing comparison. More than three times as many professors in mathematics and natural science as in the other two areas report that they stay up-to-date by conducting research and publishing. Numerous natural science professors noted the strong connection in their academic area between research activity and ongoing professional development. A biology professor concluded that "developing grant proposals in my research area" helps him to stay current. A chemistry teacher described writing textbooks as "a marvelous spur to one's currency." By definition, vital professors are professionals who keep up with developments in their disciplines. But the findings of this study suggest that the strategies they use to remain current may vary in important ways across the major subject matter divisions.

Insert Table 8 Here

Factors Influencing Professional Success

Interview participants also cited a wide range of factors that shaped their careers positively or negatively (Table 9). In many cases the findings

Table 8: Strategies for Staying Up-to-Date

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
Professional meetings, memberships	13	72.2	11	78.6	9	50.0	33	66.0
Reading (Books, journals, reviews, etc.)	16	88.9	8	57.1	15	83.3	39	78.0
Research, publication	4	22.2	10	71.4	4	22.2	18	36.0

illustrate, once again, considerable similarity in the professional experiences of vital professors across academic fields. Given the open-ended nature of the questions, quite substantial proportions of the participants in each area acknowledged the support they had received from administrators and colleagues. They also noted the benefits of positions that offered professional autonomy and flexibility. A music professor, for example, mentioned the advantage of "being left to my own devices by the administration. Being given the freedom to pursue my interests."

Other widely acknowledged forms of institutional support include small grants for research and scholarship, professional development assistance (e.g., faculty development programs, travel grants, instructional improvement funds), sabbatical leaves and released time, and positive working conditions. Several mentioned the advantages of a liberal arts college citing "congenial" and "accessible" colleagues as well as "noninterference from the administration and support when it is needed."

Insert Table 9 Here

Several data patterns in Table 9 do hint at success factors that may vary to some extent by academic area. By a factor of three, faculty in mathematics and the natural sciences and in the social sciences mentioned research grants from any source as a success factor more frequently than did art and humanities professors. This finding may reflect the greater availability of funding for scholarship in what some regard as "harder" disciplines.

Table 9: Factors Influencing Professional Success: Supports and Obstacles

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
Supporting factors:								
Administrators	9	50.0	7	50.0	7	38.9	23	46.0
Colleagues	7	38.9	6	42.9	5	27.8	18	36.0
Autonomy, flexibility	5	27.8	4	28.6	6	33.3	15	30.0
Grants for research, scholarship (any source)	2	11.1	5	35.7	6	33.3	13	26.0
Grants for research, scholarship (institutional)	12	66.7	9	64.3	11	61.1	32	64.0
Professional development assistance from institution	14	77.8	8	57.1	11	61.1	33	66.0
Sabbaticals, leaves, released time	8	44.4	8	57.1	5	27.8	21	42.0
Extended fellowships for further study (at least one semester long)	5	27.8	5	35.7	0	00.0	10	20.0
Seminars (short-term)	8	44.4	1	7.1	5	27.8	14	28.0
Change of scene (faculty exchange, consulting, employment in nonacademic setting, etc.)	3	16.7	6	42.9	3	16.7	12	24.0

Table 9: Factors Influencing Professional Success: Supports and Obstacles (continued)

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
Supporting factors:(continued)								
Working conditions, environment	9	50.0	5	35.7	9	50.0	23	46.0
Obstacles:								
Working conditions, environment	4	22.2	7	50.0	9	50.0	20	40.0
Colleagues	2	11.1	5	35.7	2	11.1	9	18.0

Close examination of the data on sabbaticals, fellowships, and seminars uncovers some intriguing patterns as well. Of the three groups, vital faculty in math and natural science most often associated various types of leaves and extended fellowships for further study with their professional success (although their colleagues in the arts and humanities were not far behind). A National Science Foundation fellowship enabling a geology professor to study in New Zealand and Australia or a sabbatical supported by a grant from the National Institutes of Health is the type of opportunity that brings a smile to the face of a science teacher. A physics professor stated that the occasional sabbatical helps him "keep all the balls in the air - research as well as teaching." The value to math and natural science faculty of time away from routine responsibilities is also supported by the data on a "change of scene." Math and natural science professors cited this factor much more frequently than did professors in the other groups.

In contrast, professors in the social sciences and especially the arts and humanities related their success to short-term seminars more often than did their counterparts in the math and natural science category. Summer workshops sponsored by the National Endowment for the Humanities are one example of the type of brief, intensive learning opportunities that bring college professors into contact with people who "understand your work" and get you "away from the distractions of the university."

The bulk of the evidence in Table 9 suggests that all types of professors benefit from different forms of career support - long-term and short-term. Yet due to the nature of their subject matter, natural science faculty may find in-depth, intensive research and professional development opportunities

lasting at least a number of months most beneficial. On the other hand, professors in the arts, humanities, and social sciences may be able to profit substantially from relatively brief seminars, workshops, and the like.

The findings on obstacles to professional success (Table 9), though sparse, lead to some further speculation about differences by field. In comparison to the other two groups, less than half as many arts and humanities professors viewed working conditions as professional hindrances. One may attribute this distinction to the growing use of technology in many academic fields. The social sciences and certainly the natural sciences are more facilities and equipment-dependent than many humanities disciplines. Hence, vital faculty in the former two areas may see more negative working conditions at the liberal arts college than do their arts and humanities counterparts.

The data on colleagues are revealing in a similar way. According to Table 9, professors see their colleagues both as career assets and obstacles. Interestingly, math and natural science professors mentioned colleagues most frequently in both positive and negative categories. This pattern probably reflects the tradition of faculty collaboration and cooperative authorship that exists in many science disciplines. While vital faculty in general value their colleagues, math and natural science professors seem most conscious of the limited colleague support that is possible in a liberal arts college. A biology professor capsulized the phenomenon experienced by many of his cohorts: "Researchers need cross fertilization, people to talk to about research." The lack of colleagues with similar interests is a "major obstacle in a small school like this."

Role Diversification

Evolving careers that grow and diversify distinguish many vital liberal arts college professors from their colleagues in general (Baldwin, 1987). Table 10 demonstrates that career variety and revision are common experiences of vital faculty regardless of their academic field. In all cases, a substantial majority of the participants in the three areas indicated that they sometimes collaborate with colleagues and have taken career risks or engaged in nontraditional professional activities. Similarly, large percentages in each category also indicated that they had made significant changes in their academic roles or responsibilities over time.

Insert Table 10 Here

A religion instructor, for example, described his life as "very much connected" and judged his team teaching in ethics to be "a splendid experience." In the same vein, an anthropologist who has done research with chemists, physicists, and historians reported, "collaboration enables me to do many things I couldn't do otherwise." Numerous vital professors also recounted professional risks they had taken during their careers. One sociologist stated "moving into gerontology was a risk. It was not an old established field. [But I] went into it out of interest." Another sociologist described "sticking my neck out for interdisciplinary studies and team teaching" [at his rather traditional institution]. Others recounted a wide array of major and minor career revisions that added "the spice of newness" to their work

Table 10: Faculty Role Diversification

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
Collaboration with colleagues (teaching, research, etc.)	12	66.7	12	85.7	15	83.3	39	78.0
Made significant change in roles or responsibilities	10	55.6	9	64.3	8	44.4	27	54.0
Taken professional risks, engaged in nontraditional professional activities	10	55.6	11	78.6	12	66.7	33	66.0

lives. Editing an institution's accredition self-study, refocusing one's scholarly interest from religion to television, and becoming a part-time administrator as director of a college's honors program are a few of the ways vital professors maintain a sense of continuing professional momentum. Just keeping pace with developments in one's field can also add new dimensions to a professor's career. For instance, a physics instructor who developed an interest in lasers noted that "lasers did not exist when I started in the field."

It seems safe to conclude that career diversification is common to vital professors in general. Nevertheless, it is worth pointing out that slightly more faculty in mathematics and the natural sciences than in the other two categories cited career diversification activities. The meaning of this pattern is not clear but deserves consideration. Perhaps mathematics and natural science professors have more opportunities for funding, consulting, collaboration, and other factors that add variety to the academic career.

Short-Term Professional Goals

Finally, data on the goals professors hope to achieve during the next five to ten years further illustrate the broad similarity that characterizes liberal arts college professors from various subject areas. Table 11 shows that research, writing, and publication are the most frequently mentioned goals of professors in all three subject categories. Many mentioned books and articles, even almanacs and video projects they hoped to complete reasonably soon. Other types of professional goals, likewise, fail to distinguish among the three disciplinary groupings in any clear-cut way. Table 11 indicates that vital professors in this type of college are goal-oriented persons who

Table 11: Short-Term Goals

	ARTS/ HUMANITIES		MATH/ NATURAL SCIENCES		SOCIAL SCIENCES		TOTAL	
	N	%	N	%	N	%	N	%
Research, publication	12	66.7	8	57.1	12	66.7	32	64.0
Service to institution or department	3	16.7	3	21.4	3	16.7	9	18.0
Professional development goals	2	11.1	1	7.1	0	00.0	3	6.0
Teaching related goals	2	11.1	3	21.4	5	27.8	10	20.0
External professional activities and service	4	22.2	1	7.1	2	11.1	7	14.0
Other	0	00.0	1	7.1	2	11.1	3	6.0
No 5 to 10 year goals	2	11.1	2	14.3	4	22.2	8	16.0

possess explicit short-term objectives. However, the data patterns reveal no obvious differences among the professors based on their disciplinary affiliations.

Insert Table 11 Here

Summary and Discussion

Due to the exploratory nature of this study, it would be inappropriate to draw many firm conclusions at this time. Primarily, the findings serve to illuminate the work lives of vital professors in the undergraduate liberal arts college. They also permit informal speculation concerning the ways different academic fields structure vital professors' careers.

A consistent pattern of evidence, however, does argue strongly for one general conclusion: Vital professors in liberal arts colleges, regardless of their area of specialization, share a common professional profile. Whether they come from history, geology, French literature, or some other field, these vital faculty have dynamic and diversified careers that are strongly shaped by the liberal arts institutions where they work.

The data indicate that the participants in this study view teaching as their primary interest, responsibility, and professional strength. This teaching orientation holds for all three academic areas. In each category, research and scholarship as well as other faculty roles hold subsidiary positions.

Vital liberal arts faculty also share a common approach to their professional responsibilities. No matter what area they represent, they devote the majority of their long work week to instruction related duties. Similarly,

they devote time to scholarship, institutional service, and outside professional activities and service in the a descending order.

The findings on professors' activities and achievements reveal a similar degree of consistency. Vital faculty across fields are active in such areas as course design, grant proposal development, consulting, and scholarly publication. As a rule, they operate on many professional fronts, and, hence, maintain diversified careers. This conclusion is supported further by the large numbers in each category who indicated they have collaborated with colleagues, taken professional risks, and made significant changes in their roles and responsibilities.

Near consensus on the principal sources of faculty satisfaction and dissatisfaction even emerges from the data. Substantial percentages in the three academic areas agree that students offer much satisfaction while committee meetings, administrative duties, and the routine aspects of academic life foster dissatisfaction.

Much agreement also occurs on the range of factors that support vital faculty members' performance. It is common for these individuals to stay current in their fields by reading, joining disciplinary associations, and attending professional conferences. Likewise, they seem to benefit from work environments that offer supportive colleagues and administrators, autonomy, good working conditions, and a range of resources for professional growth.

The data on short-term goals demonstrates that most vital professors have concrete professional objectives. Whether they wish to complete a publication, design a new course, or develop an interdisciplinary program, vital faculty in all the fields studied possess clear-cut goals that help to

direct their work efforts.

Some patterns in the data reveal field-based differences that deserve thoughtful speculation and further examination, though few clear-cut distinctions emerge. In particular, vital professors in mathematics and the natural sciences seem to approach academic life in a somewhat distinctive fashion. As a group they are slightly more research-oriented and less teaching-oriented than their counterparts in the other areas. Hence, they regard research activity as a means to stay current more frequently than do their colleagues in other fields. Data trends also suggest that mathematics and science professors regard long-term research and professional development opportunities as most beneficial to their professional success. The findings likewise indicate that colleagues are perhaps a more critical element in the work environment of these professors than of faculty in the arts and humanities and social sciences. Finally, the combined evidence on role diversification suggests that math and natural science faculty may have more opportunities for career expansion given the nature of their fields and their fields' more direct connection with government, business, and other potential sources of support.

Not surprisingly, concern about negative working conditions was more prominent in the mathematics and natural science and social science areas than in the humanities. This finding probably reflects the growing dependence of the former two areas on sophisticated technology. In contrast, it is still possible to compose good poetry with a pencil and paper.

Short-term seminars and workshops appear to benefit more social science and humanities faculty than professors in mathematics and the natural

sciences. Again, the distinctive nature of the various fields may necessitate somewhat different approaches to maximize professional growth.

In sum, the vital professor in the liberal arts college context appears to be cut from one basic, but flexible, mold. The most compelling findings of this study demonstrate that vital academics in this institutional setting have more similarities than differences. What emerges is a generic model of the vital liberal arts college professor. The study does not provide sufficient evidence to define the vital professor specifically from the perspective of distinctive academic areas.

This conclusion is consistent with the thesis Clark (1987) advances in The Academic Life: Small Worlds, Different Worlds. He suggests that as one descends the institutional hierarchy from the research university at its pinnacle, the power of the disciplines to structure academic life decreases and the influence of institutions increases. It appears that the undergraduate liberal arts colleges in this study had a greater impact on vital professors' roles and activities than did the professors' academic fields. Distinctive disciplinary subcultures may account for some variation in the study's findings. But the many similarities that exist across fields suggest that the dominant cultural influence in this context is the small, teaching-oriented college.

Indeed, it would not be irresponsible to go one step beyond Ruscio's (1987) contention that a distinctive form of scholarship has evolved in the selective liberal arts college. From the findings of this study, one may hypothesize that a distinctive form of academic life exists at this special type of higher education institution. Successful faculty at these schools

are first and foremost good teachers. They identify with their academic disciplines but not to the degree of their counterparts in the research university or perhaps even the "university college" of Jencks and Riesman (1969). The considerable amount of interdisciplinary teaching and scholarship at the participating institutions highlights this difference. Instruction, scholarship, and other professional roles in the undergraduate liberal arts college are often modified by the nature of its students, the attributes of faculty colleagues, limited resources, and, especially, by the historic mission of this type of college. Vital professors in the four institutions studied seem to live in a "different world." But it is a world defined more by their institution than by their academic disciplines.

Implications for Policy and Practice

The research findings suggest several steps small colleges can take to promote faculty vitality:

1. Encourage faculty to revise and expand their professional roles. This study demonstrates that vital professors, regardless of their field, have dynamic, multidimensional careers that continue to offer challenge and opportunities for growth. The most beneficial thing a college can do is to maintain a flexible and supportive work environment that encourages ongoing career development for all faculty.

2. Be sensitive to subtle differences among the major academic fields. Though vital professors have much in common, it is important to support faculty in ways most appropriate to their fields. For example, funds to send faculty to short summer workshops may aid English professors' scholarship but do little to support research in physics or chemistry. Likewise, state-of-the-art equipment and facilities are more important in some fields than in others. All professors can profit from opportunities for career growth and achievement. But the most effective forms of professional assistance may vary to some degree by academic area.

3. Recognize that some fields may automatically be more resource and opportunity rich than others. Colleges should attempt to compensate for disparities by reserving funds and designing programs specifically for less "advantaged" fields.

Implications for Future Research

The findings of this study raise many questions that should be examined in future faculty vitality research. First, the absence of clear differences by academic field among liberal arts faculty suggests that an alternative research strategy may be necessary to validate the presence or absence in small colleges of the strong discipline influence Clark (1987) describes. One approach could be to employ a more structured data collection instrument and a much larger faculty sample. It might also be enlightening to make sharper comparisons initially. For example, a study could contrast vital professors in distinctly different fields such as chemistry, religion, and economics rather than employing a cross section of professors representing many disciplines.

A second study could compare vital professors who represent C.P. Snow's Two Cultures (1964). Several findings of the present study suggest that sometimes it is most meaningful to divide liberal arts faculty into "hard" (mathematics and natural sciences) and "soft" fields (arts, humanities, social sciences). Again, a clearer demarcation of this sort might uncover important factors that separate vital professors in different academic areas.

Finally, it would be beneficial to test in additional settings Clark's thesis concerning the relative influence of discipline and institution on faculty work lives. This study indicates that institutional demands take priority in the undergraduate liberal arts college. Similar studies in community colleges, regional universities, and specialized higher education institutions would help to clarify what factors shape academic careers and what forces are closely related to vitality in different institutional contexts.

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Appendix

Description of Vital Professors

Vital professors typically are individuals who challenge students academically and contribute to their overall development. Usually they participate in the governance and intellectual life of their institution and are involved in the debates of their discipline or professional field. Vital professors are curious and intellectually engaged. They enjoy the respect of colleagues and are effective in the multiple roles of members of the academic profession. Perhaps most significant, vital professors grow personally and professionally throughout the academic career, continually pursuing expanded interests and acquiring new skills and knowledge. Adjectives that would apply to vital professors include enthusiastic, caring, dedicated, vigorous, creative, flexible, risk-taking, and regenerative.

Essentially, vital professors are "star performers" in those areas that their institutions most prize (Schuster, 1986). Vital professors do not fit into a single mold, however. Vitality exists in many forms. Vital professors may be campus leaders, inspiring teachers, prolific scholars, excellent advisors, but they do not necessarily perform all faculty roles with equal zest or skill.